SPRING ROOSTS OF THE ROBIN

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MANY accounts of the late summer, fall, and winter roosting of the Robin (*Turdus migratorius*) have been published, but few, if any, good descriptions of spring roosting appear in print. Brewster (1890: 364), in his fine account of the summer roosting of the Robin in Massachusetts, found that the roosts were never used before June 11, and usually not until the twentieth of that month. Forbush (1929: 414) infers that the roosts are not used prior to June and that the young do not use the roost until July. This paper is a report of a small roost which was located on the Cornell University campus at Ithaca, New York during the spring, summer, and fall of 1937.

The Robins roosted in a small grove of conifers, occupying a steep northerly slope of 4¼ acres in area. At the eastern end of the roost was a dense, one-acre patch of red pines and white pines. The trees grew very close together, with interlocking branches and were about thirty years old. This was the part of the grove to which most of the birds resorted. The western part of the area was much more open, having a few clumps of white pines and scattered spruces and firs. In outline, the area was rectangular, about 150 feet across and 1200 feet in length. It extended from the southeast to the northwest. Open fields lay to the north and east of the area. To the south and west was a gravel road, and beyond the road were scattered buildings, the nearest being 75 feet from the roost. The northwestern approach was dominated by a heavy growth of large trees and was little used by the birds in coming to the roost.

While the birds were undoubtedly using this roost earlier in the season, their presence there was first noted on April 28, when the sun set at 6:55 P.M. At 7:30 P.M. it was cloudy and a low breeze was blowing. Many birds were in full song, but more of them were only calling. During roosting time, song could have little territorial significance. Perhaps the singing males were unmated birds. There were at least 200 Robins in the conifers. Many flew over my head and into the cover as I stood at the southern exposure of the roost. The roosting birds shifted their position almost continuously, noisily flapping as they moved in the dusk. A true chorus of songs was given and at no time were less than three or four birds singing.

Four Robins were flushed as they roosted in a white pine that held a Robin's nest containing two eggs. This pair had evidently ceased defending its nest-tree from intrusion by other Robins early in the evening, when roosting began. This lull in the defense of the nest with the coming of dusk is probably due to the fact that the female is concerned with incubation and the male rarely roosts in the nest-tree.

By 7:40 P.M. the chorus was over, and only a few chirps and an occasional snatch of song were heard. The birds roosted five to twenty

in a tree, and they flew out in hordes when I walked beneath the pines. The roost was absolutely silent at 7:45 P.M.

On April 29, at 7:24 P.M., the weather was clear and the temperature was about 55° F. The Robin chorus was in full swing. The birds came to the roost singly or in pairs. Many more were calling than singing.

A minute-by-minute count of the Robins entering the roost was made as I stood on the gravel road to the south of the middle of the roost. It was certainly far from a complete count, for the light was poor, the extremes of the roost were 600 feet away from me, and I could count only the birds that came in from the south and west and not those from the north and east. The times given in the following table represent the end of a minute interval.

TABLE 1.

RELATION OF TIME TO THE NUMBER OF ROBINS ENTERING THE ROOST

Period No.	Time	No. of Robins	Period No.	Time	No. of Robins
1	7:27	12	10	7:41	22
2	7:30	17	11	7:42	10
3	7:31	26	12	7:43	4
4	7:34	15	13	7:44	3
5	7:35	30	14	7:45	1
6	7:36	27	15	7:47	2
7	7:37	20	16	7:48	1
8	7:38	23	17	7:49	0
9	7:39	20			
					233

The earlier birds that came to the roost called frequently and often alighted on a lawn, housetop, telephone wire or tree before entering the roost. As they approached the roost they were almost always within 100 feet of the ground and often flew over my head only a few feet out of reach. Between 7:30 and 7:40, when it was almost dark, the birds usually flew straight into the roost with no stops along the way. By 7:48 I could not see what I wrote in my notebook. The last Robin to enter the roost came in at 7:49. It fluttered heavily into a pine, apparently not being well able to see where it was going.

The singing, which was so prominent at 7:24, was carried on by only a few scattered birds at 7:40. At 7:45 only one bird sang and only three called. No songs and only occasional outbreaks of chirping were heard after this. After 7:50 all was quiet.

On April 28 it was cloudy and silence came to the roost five minutes earlier than it did on the following day, when it was clear.

An attempt was made on April 29, and at subsequent dates, to trap Robins as they came to the roost in the deep dusk. It was my hope that they would not be able to see me. However, it turned out that no Robins came to roost after darkness had arrived, and in the last faint

glow of twilight they were always able to see me or a net set for them to fly into.

On April 30 the roost was visited at 7:30 P.M., when the weather was clear and the temperature was 55° F. Fifty Robins were frightened from a brushy spruce that was only 35 feet high. The birds roosted both against the trunk and near the tips of horizontal branches. The birds flushed from the trees flew out heavily, often rising more or less straight into the air, but sometimes going to a nearby tree. Those ascending vertically seemed to get their bearings soon and flew down to a new roosting place, where they had little trouble in finding a perch. When the beam of a weak flashlight was played on the birds they "froze," with their eyes open and their necks outstretched. They appeared to be confused by the light and were nervous and ready for action.

On May 3 three adult Robins were collected as they roosted. Two of these proved to be females. The condition of the ovary indicated that one of the females would have laid an egg in a day or two. The yolk of the largest egg was fully matured. In the ovary of the other female the largest yolk was 5 mm. in diameter, which is a little over a third of the diameter of a mature yolk. The presence of these females in the roost at this stage in the nesting cycle shows that the nest is not protected at night by the parents until the first egg is laid. Recently completed nests, in which an egg had not yet been laid, were visited on a few occasions, and in no case was a parent Robin flushed from the nest or close to it.

Nests containing eggs were often visited at night. One of the parents was always on the nest, but the other parent did not roost near the nest. In the few occasions where the sex of the incubating bird could be determined, it was a female. The nesting male birds in the region surrounding the roost left the immediate vicinity of their nests at dusk and flew to the roost. This observation was borne out by collecting seven Robins in the roost, all of which were male birds, between May 6 and July 10, 1937. At this season almost all of the female Robins spent the night on the nest.

On the evening of May 6 the roost was visited after the birds had settled down for the evening, and a number of them were flushed. They were quiet until disturbed, but as they fluttered off they usually chirped a few times.

Young Robins began using the roost as soon as they were able to fly sufficiently well to reach the roost. They were usually about three weeks old when they ceased spending the night in the vicinity of the nest in which they were raised.

No other Robin roost was known to be located near this one. Robins were seen flying to the roost from points half a mile away. As some of these birds were flying rather high when observed, it is probable that

birds within a mile radius of the roost used it each evening. At night the only Robins not using the roost were female birds that were incubating eggs or brooding young.

For purposes of comparison some of the observations of Emlen (1934: 341–343) are given here. His studies were made during spring and summer from 1927 to 1931[1] at Cresheim Creek, Philadelphia, where thousands of Robins were roosting with even larger numbers of Grackles and Starlings. The first spring arrivals visited this place at night, and from then on they continued to return night after night in seemingly numberless multitudes. The roosting site was a thirty-year plantation of hemlock and pine on a hillside. While the blackbirds roosted high in the trees, the Robins seemed to prefer the lower branches, where they were left unmolested. A common place to find them was on a broad, dense horizontal branch of hemlock from 7 to 10 feet from the ground. Frequently a bird would be encountered conspicuously roosting only a few feet up and well within reach of prowling terrestrial predators. When roosting at low elevations, the birds were often only 18 inches in from the tip of a branch, but when the site selected was near the top of a tree they were usually huddled close against the trunk.

Dr. Emlen banded several hundred Robins at the roost. They were captured by spotting them at night with a flashlight. Some of the Robins banded in April were recovered as far north as Newfoundland in the summer. Thus the roost served as a resting place for migrating Robins en route to a more northern nesting ground.

As the spring advanced this roost diminished in size, but served as headquarters and nightly rendezvous for a large number of Robins throughout the entire summer.

Summary

During the spring of 1937 a company of from 200 to 300 Robins roosted in a small grove of conifers on the Cornell University campus, at Ithaca, New York. Activities at this roost were studied from April 28 to July 10. The following facts were ascertained:

On April 29 (the sun set at 6:56 P.M., E.S.T.) Robins were entering the roost at the rate of about fifteen a minute at 7:30 P.M. About twenty a minute entered the roost between 7:31 and 7:41, following which time not more than ten birds entered the roost during any one-minute period. The last bird entered the roost at 7:49.

Robins came to roost from all directions, although few birds flew in from the northwest, where there was a heavy growth of large trees. The birds came from distances of more than half of a mile.

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[1] Dr. Emlen made spring visits to the Cresheim roost on the following dates: 1927, April 12, 13, 19, 25, 28, May 7; 1928, March 18, 25, April 7, 8, 14, 15, 19, May 4, 12; 1929, April 6, 12; 1930, March 23, May 4; 1931, March 27, April 4.

A chorus of song was given by the roosting male birds. This chorus played no part in territorial behavior.

A tree in which a Robin's nest containing two eggs was located was used as a roosting site by four Robins.

Female Robins continued to use the roost until a day or two before they laid their first egg.

Male Robins spent their nights in the roost throughout the nesting period, leaving their mates to guard and care for the nest.

Young Robins began using the roost as soon as they were able to fly to it.

A roost studied at Cresheim Creek, near Philadelphia, by Dr. John T. Emlen, was used by resident Robins and also by transients en route to a more northern breeding area. This fact was determined through the recovery of banded birds from as far north as Newfoundland.

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